IN THE CLAIMS

Please amend the claims as follows:

1. (original) A method of controlling a window in a contention resolution protocol for a shared channel between at least three contending stations, according to which a station contends for a channel over a number of steps by generating a number, x, within an interval with a lower bound, l, initially equal to an initial lower bound, L, and an upper bound, h, initially equal to an initial upper bound, U; and by trying to access the channel if the number, x, falls within a window with the lower bound, l, and an upper window bound, w; a station which generated a number outside the window is eliminated from contending for the channel; whereas a station which generated a number within the window continues to contend for the channel; the method continues until one station is singled out to be determined winning the contention; the method comprises a step of:

- setting the upper window bound, w, to set a window within which the expected number of stations that will try to access the channel is approximately equal to 1.

2. (original) A method according to claim 1, wherein the upper window bound, w, is set such that the probability P1 that the

generated number, x, is less than or equal to the upper window bound, w, minus the probability P2 that the generated number, x, is less than or equal to the lower bound, l, is approximately equal to one divided by an approximate number of contending stations.

3. (original) A method according to claim 1, wherein the upper window bound, w, is calculated according to the following expression:

$$w = \mathrm{W}(l,h) = \begin{cases} \mathrm{F}^{-1}\left(\mathrm{F}(l) + \dfrac{1-\mathrm{F}(l)}{n}\right) & \text{if } h \cong U \\ \mathrm{F}^{-1}\left(\dfrac{\mathrm{F}(l)+\mathrm{F}(h)}{2}\right) & \text{otherwise} \end{cases}$$

where the generated number, x, has a probability distribution F on $[L,U]$ with $\mathrm{F}(L) = 0$ and $\mathrm{F}(U) = 1$ and where F is invertible such that there exists a function F^{-1} with $\mathrm{F}^{-1}(\mathrm{F}(x)) = x$; and where n represents a number of contending stations or an estimated number of contending stations.

4. (original) A method according to claim 1, wherein the upper window bound, w, is set according to the following expressions:

$w = \mathrm{W}(l,h) \cong l + \frac{h-l}{n}$ where $h \cong U$, and

$w = \mathrm{W}(l,h) \cong \frac{l+h}{2}$ otherwise;

where n represents a number of contending stations or an estimated number of contending stations.

5. (currently amended) A method according to ~~any of the claims 1 to 4~~claim 1, comprising the steps of:

detecting whether a collision occurs or whether the channel is idle;

if a collision occurs setting l' = l; h' = w;

if the channel is idle setting l' = w; h' = h;

calculating w' = W(l',h');

updating the interval and window bounds by setting l = l'; w = w'; h = h'.

6. (original) A method of controlling a window in a contention resolution protocol for a shared channel between at least three contending stations, according to which a station contends for a channel over a number of steps by generating a number, x, within an interval with a lower bound, l, initially equal to an initial lower bound, L, and an upper bound, h, initially equal to an initial

upper bound, *U*; and by trying to access the channel if the number, *x*, falls within a window with a lower window bound, *w*, and the upper bound, *h*; a station which generated a number outside the window is eliminated from contending for the channel; whereas a station which generated a number within the window continues to contend for the channel; the method continues until one station is singled out to be determined winning the contention; the method comprises a step of:

- setting the lower window bound, *w*, to set a window within which the expected number of stations that will try to access the channel is approximately equal to 1.

7. (original) A method according to claim 6, wherein the lower window bound, *w*, is set such that the probability P1 that the generated number, *x*, is greater than or equal to the lower window bound, *w*, minus the probability P2 that the generated number, *x*, is greater than or equal to the upper bound, *h*, is approximately equal to one divided by an approximate number of contending stations.

8. (original) A method according to claim 6, wherein the lower window bound, *w*, is calculated according to the following expression:

$$w = \mathrm{W}(l,h) = \begin{cases} \mathrm{F}^{-1}\left(\mathrm{F}(h)\left(1-\frac{1}{n}\right)\right) & \text{if } l \cong L \\ \mathrm{F}^{-1}\left(\frac{\mathrm{F}(l)+\mathrm{F}(h)}{2}\right) & \text{otherwise} \end{cases}$$

where the generated number, x, has a probability distribution F on $[L,U]$ with $F(L) = 0$ and $F(U) = 1$ and where F is invertible such that there exists a function F^{-1} with $F^{-1}(F(x)) = x$; and where n represents a number of contending stations or an estimated number of contending stations.

9. (original) A method according to claim 6, wherein the lower window bound, w, is set according to the following expressions:

$w = \mathrm{W}(l,h) \cong h - \frac{h-l}{n}$ where $l \cong L$, and

$w = \mathrm{W}(l,h) \cong \frac{l+h}{2}$ otherwise;

where n represents a number of contending stations or an estimated number of contending stations.

10. (currently amended) A method according to ~~any of the claims 6 to 9~~claim 6, comprising the steps of:

detecting whether a collision occurs or whether the channel is idle;

if the channel is idle setting l' = l; h' = w;

if a collision occurs setting l' = w; h' = h;

and calculating w' = W(l',h');

updating the interval and window bounds by setting l = l'; w = w'; h = h'.

11. (currently amended) A method according to ~~any of claims 1 to 10~~claim 1, wherein a station is arranged to maintain values representing the bounds of the window and a generated number, and wherein the station evaluates whether the generated number falls within the window and obtains information about the status of the channel; if the information indicates that the channel is idle or a collision has occurred and if the generated number falls within the window at least one of the window bounds is changed as set forth in ~~any of the preceeding claims~~claim 1 and the station tries to communicate on the channel.

12. (currently amended) A computer program product comprising code means for performing the method according to ~~any of the preceeding claims 1 to 11~~claim 1 when executed on a computer.

13. (currently amended) An apparatus comprising a contention resolution processor which is arranged to operate according to the method set forth in ~~any of the preceding claims 1 to 11~~claim 1.

14. (original) An apparatus according to claim 13, comprising transmission and receiving means arranged to communicate via a channel in a wireless medium.